

Application No. 09/680,118
Amendment "D" dated July 8, 2004
Reply to Office Action mailed March 10, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a database management system that includes a database engine that receives and implements high-level document commands, each high-level document command comprising one or more operations to be performed on a document, a method for allowing client applications to control how a particular high-level document command is implemented, the method comprising the following:

an act of receiving a single high-level document command meeting certain criteria, the single high-level document command including one or more operations;

prior to implementing the single high-level document command, an act of identifying one or more client applications that are to be notified of the receipt of only high-level document commands meeting certain criteria;

prior to implementing the single high-level document command, an act of notifying the one or more identified client applications that the single high-level document command meeting the certain criteria has been received, notification of the one or more client applications being triggered solely as a result of receiving the single high-level document command;

an act of receiving modifying instructions from the one or more client applications on how to affect the implementation of the single high-level document command; and

an act of altering the one or more operations included in the single high-level document command according to the modifying instructions ~~such that implementation of the single high-level document command is changed even when the single high-level document command is not in conflict with other high-level document commands.~~

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2. (Previously Presented) The method in accordance with Claim 1, wherein the modifying instructions are for performing additional operations in addition to the one or more operations included in the single high-level document.

3. (Previously Presented) The method in accordance with Claim 2, wherein the additional operations and the one or more operations included in the single high-level document command are implemented atomically in the database.

4. (Previously Presented) The method in accordance with Claim 3, wherein the additional operations and the one or more operations included the single high-level document command are implemented atomically using a group operation.

5. (Previously Presented) The method in accordance with Claim 1, wherein the modifying instructions are for changing how the high-level document command is to be implemented in a database that is accessed by the database management system.

6. (Previously Presented) The method in accordance with Claim 1, wherein the modifying instructions are for preventing the high-level document command from being implemented at all.

7. (Original) The method in accordance with Claim 1, wherein the high-level document command is for performing an operation on an electronic mail message.

8. (Original) The method in accordance with Claim 1, wherein the high-level document command is for performing an operation on a folder that contains electronic mail messages.

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9. (Previously Presented) The method in accordance with Claim 1, wherein the high-level document command is for moving the document.

10. (Previously Presented) The method in accordance with Claim 1, wherein the high-level document command is for deleting the document.

11. (Previously Presented) The method in accordance with Claim 1, wherein the high-level document command is for copying the document.

12. (Previously Presented) The method in accordance with Claim 1, wherein the high-level document command is for updating the document.

13. (Previously Presented) The method in accordance with Claim 1, wherein the high-level document command is for adding the document.

14. (Original) The method in accordance with Claim 1, wherein the act of notifying the one or more identified client applications comprises an act of transmitting a message to a machine that hosts the client application, the machine that host the client application being different than the machine that hosts the database management system.

15. (Original) The method in accordance with Claim 1, wherein the act of notifying the one or more identified client applications comprises an act of passing the notification through a function call to the identified client application, the client application hosted by the same machine as at least the portion of the database management system responsible for performing the act of notifying the client applications.

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16. (Original) The method in accordance with Claim 1, wherein the act of receiving instructions from the one or more client applications occurs prior to the act of receiving the high-level document command.

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17. (Previously Presented) In a database management system that includes a database engine that accesses and updates objects in a database, the database engine receiving high-level document commands, each high-level document command for performing an operation on a document that is associated with a plurality of tables in the database, a method for allowing client applications to control how a particular high-level document command is implemented in the database, the method comprising the following:

an act of receiving a single high-level document command meeting certain criteria;
and

a step for allowing one or more client applications to affect how the received single high-level document command is to be implemented, if at all, in the database,

the step for allowing one or more client applications to affect how the single high-level document command is to be implemented, including an act of identifying one or more client applications that are to be notified of the receipt of only high-level document commands meeting certain criteria, and an act of notifying the one or more identified client applications that a high-level document command meeting the certain criteria has been received prior to implementing the single high-level document command and solely in response to receiving the single high-level document command.

18. (Currently Amended) The method in accordance with Claim 17, wherein the step for allowing one or more client applications to affect how the single high-level document command is to be implemented further includes:

an act of receiving instructions from the one or more client applications on how to affect the implementation of the single high-level document command in the database; and

an act of altering one or more operations included in the single high-level document command according to the received instructions when implementing the high-level document command such that implementation of the single high-level document command is changed even when the single high-level document command is not in conflict with other high-level document commands.

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19. (Currently Amended) A computer program product for use in a database management system that includes a database engine that receives and implements high-level document commands, each high-level document command comprising one or more operations to be performed, a computer program product for implementing a method for allowing client applications to control how a particular high-level document command is implemented, the computer-program product comprising a computer-readable medium that contains computer-executable instructions for performing the following:

an act of detecting the receipt of a single high-level document command meeting certain criteria, the single high-level document command including one or more operations;

prior to implementing the single high-level document command, an act of identifying one or more client applications that are to be notified of the receipt of only high-level document commands meeting certain criteria;

prior to implementing the single high-level document command, an act of causing the one or more identified client applications to be notified that the high-level document command meeting certain criteria has been received, notification of the one or more client applications being triggered solely as a result of receiving the single high-level document command;

an act of detecting the receipt of modifying instructions from the one or more client applications on how to affect the implementation of the single high-level document command; and

an act of altering the one or more operations included in the single high-level document command according to the modifying instructions ~~such that implementation of the single high-level document command is changed even when the single high-level document command is not in conflict with other high-level document commands.~~

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20. (Previously Presented) The computer program product in accordance with Claim 19, wherein the computer-executable instructions for performing the act of altering the or more operations included in the single high-level document command comprise computer-executable instructions for performing additional operations in addition to the one or more operations included in the single high-level document command.

21. (Previously Presented) The computer program product in accordance with Claim 20, wherein the computer-executable instructions for performing additional operations comprise computer-executable instructions for atomically implementing the additional operations and the one or more operations included in the single high-level document command in a database accessed by the database management system.

22. (Previously Presented) The computer program product in accordance with Claim 19, wherein the computer-executable instructions for performing the act of causing the one or more identified client applications to be notified comprise computer-executable instructions for performing an act of causing a message to be transmitted to a machine that hosts the client application, the machine that host the client application being different than the machine that hosts the database management system.

23 (Original) The computer program product in accordance with Claim 19, wherein the computer-executable instructions for performing the act of causing the one or more identified client applications to be notified comprise computer-executable instructions for performing an act of passing the notification through a function call to the identified client application, the client application hosted by the same machine as the computer-executable instructions for performing the act of causing the one or more identified client applications to be notified.

24 (Original) The computer program product in accordance with Claim 19, wherein the computer-readable media comprises one or more physical storage media.

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25. (Previously Presented) A database management system for implementing high-level document commands for performing an operation on a document, each document being associated with a plurality of tables in an underlying database, the database management system comprising:

a database application that is configured to send high-level document commands;

a notification component that is configured to send a notification to any identified client application when a single high-level document commands meeting certain criteria is received by the database management system, and prior to implementation of any operations included in single high-level document command, notification being triggered solely as a result of receiving the single high-level document command;

an instruction receiver module that is configured to receive instructions from the notified third party application on how to implement operations included high-level document commands; and

a database engine configured to alter one or more operations included in the single high-level document according to received instructions when implementing the single high-level document commands.

26. (Cancelled)